



# City Light Rates 101

Communications & Public Affairs

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# INTRODUCTION

# RATE SETTING PROCESS CONSISTS OF THREE STEPS

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- Revenue Requirement determines the amount of revenue needed to be collected from customers in order to cover the costs of doing business and meet required financial policies.
- Cost of Service distributes the costs of doing business across customer classes and determines the average annual rate by class.
- Rate Design is the process of shaping rates, charges, and credits for customer classes so that the classes meet their portion of the revenue requirement in a way that is consistent with City goals and policies.

# THREE PARAMETERS OF RATE DESIGN

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## 1. Rate Class

- Residential
- Small General Service (< 50 kW/month)
- Medium General Service (50 kW – 999 kW/month)
- Large General Service (1,000 kW – 9,999 kW/month)
- High Demand General Service (10,000 kW/month +)

## 2. Rate Structure

- Flat, blocked, seasonal, time-of-use, etc.

## 3. Rate Element

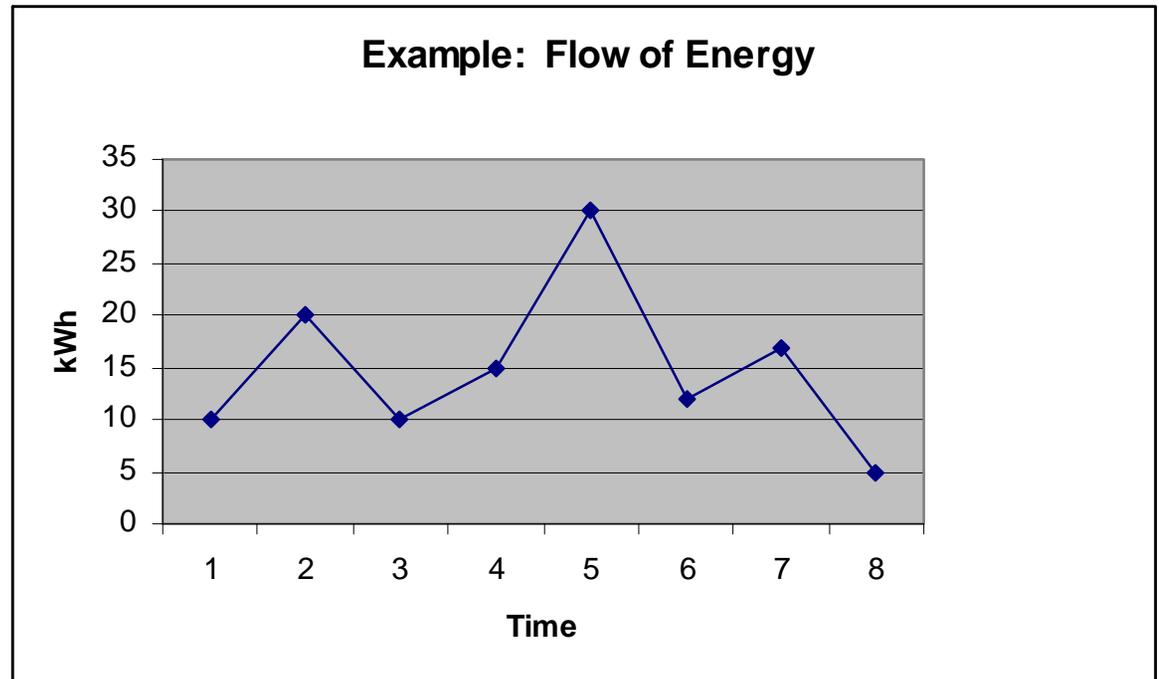
- Energy, demand, and other charges

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# GLOSSARY

# GLOSSARY: MEASURE OF ELECTRICITY USE

- Watt: a measurement of the rate of electricity use, the most common unit of measurement is 1,000 watts, or Kilowatt (kW)
- kW of demand: measures maximum use of electricity at a given point in time
- Kilowatt-hour (kWh): a measure of the flow of electricity over an hour – 10 100-watt lights on for 1 hour = 1 kWh



# GLOSSARY: RATE STRUCTURE

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- **Flat:** electricity use is charged the same price per kWh regardless of time or quantity. City Light has a flat rate for small and medium general service customers.
- **Block :** The price of electricity changes at different levels of consumption.
- **Inverted Block:** The price charged per kWh increases as consumption increases. SCL residential customers have inverted two-block rates to encourage conservation.
- **Lifeline:** Applies to residential customers. The first block of electricity is priced below cost to cover essential uses such as lighting, cooking, and refrigeration. The revenue lost in the first block is made up in higher-priced succeeding block(s).
- **Time of Use:** Prices vary by season and/or time of day. This rate structure assesses higher prices for usage during peak demand periods such as winter or early evening. Seattle has time-of-day rates for large and high demand general service customers.

# GLOSSARY: RATE ELEMENTS

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- **Energy charge:** That portion of a customer's bill for electric service based upon the electric energy (kWh) consumed and billed under an applicable rate schedule.
- **Demand charge (aka "capacity charge"):** That portion of a customer's bill for electric service based upon the peak electric capacity (kW) demanded or required by power-consuming equipment and billed under an applicable rate schedule.
- **Base service charge (BSC, aka "customer charge"):** A charge that is billed whether any electricity is used or not. Applies to City Light residential classes.
- **Minimum charge:** A charge that is billed only if the amount billed for energy use is less than this amount. Like BSC but applies to City Light non-residential classes.

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# **RATE DESIGN POLICY OBJECTIVES**

## **Resolution 31351**

# POLICY OBJECTIVES

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- A. **Higher Rates for Higher Consumption:** This may be accomplished by establishing thresholds that define ever higher blocks of energy consumption, each block having a higher rate than the preceding block.
- B. **Demand Charges:** Rate schedules that include demand charges should not contain declining demand charges.
- C. **Residential First Block:** The residential first block of electricity is intended to meet the essential needs of residential customers and should be priced at or below the average cost of service to those customers.
- D. **Rate Discounts:** Discounts shall be provided to customers with customer-owned transformers and to customers who are metered before transformation.
- E. **Time-of-Use Rates:** City Light shall implement time-of-use rates, whether seasonal, daily, or hourly, where such differentiation options are reasonably feasible.
- F. **Low Income Rates:** Rates for low-income residential customers shall be lower than regular residential rates by at least 50%.

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# CURRENT RATES

# RESIDENTIAL RATES: STANDARD

## 2013 Residential Standard - City Rates

1 <sup>st</sup> block per kWh	\$0.0466
2 <sup>nd</sup> block per kWh	\$0.1071
BSC/day	\$0.1570

- Inverted two-block rate structure encourages conservation:
  - 1st block rate is priced below average cost.
  - 2nd block rate should reflect marginal cost of energy to the customer. Current rate is higher than marginal cost because more revenue needs to be collected in the second block to compensate for smaller first block rate.
- Higher 1st block consumption (16 kWh/day) in Winter (Oct-Apr) and lower (10 kWh/day) in Summer.
- BSC is designed to recover billing/account/meter reading costs.
- Meets policy objectives [A](#), [C](#) and [E](#).

# RESIDENTIAL RATES: LOW INCOME

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## 2013 Residential Low Income - City Rates

1 <sup>st</sup> block per kWh	\$0.0198
2 <sup>nd</sup> block per kWh	\$0.0387
BSC/day	\$0.0628

- Same structure as Standard (1<sup>st</sup> & 2<sup>nd</sup> block energy charges, BSC).
- Set at 40% of average Standard Residential rate by jurisdiction.
- Adjusted 2<sup>nd</sup> block and 1<sup>st</sup> block relationship to encourage energy conservation.
- Meets policy objectives [A](#), [C](#), [E](#) and [F](#).

# SMALL GENERAL SERVICE RATES

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## 2013 Small General Service - City Rates

Flat energy rate/kWh	\$0.0716
Minimum charge/day	\$0.26
Transformer Investment/kW	\$0.23

- Energy is priced at the same flat rate per kWh to collect costs of energy and distribution for this class.
- Minimum charge equals 100% of the marginal customer service cost per meter per day.
- Meets policy objective D.

# MEDIUM GENERAL SERVICE RATES

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## 2013 Medium General Service - City Rates

Flat energy rate/kWh	\$0.0566
Flat demand rate/kW	\$2.13
Minimum charge/day	\$0.62
Transformer Investment/kW	\$0.23

- Demand charge is set to collect a targeted amount of the distribution costs.
- Energy charge is set to collect the energy costs and the remainder of the distribution costs not collected by the demand charge.
- Minimum charge equals 100% of the marginal customer service cost per meter per day.
- Meets policy objectives **B** and **D**.

# LARGE AND HIGH-DEMAND GENERAL SERVICE RATES

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## 2013 Large General Service - City Rates

Peak energy charge/kWh	\$0.0657
Off-peak energy charge/kWh	\$0.0438
Peak demand charge/kW	\$1.52
Off-peak demand charge/kW	\$0.23
Minimum charge/day	\$16.39
Transformer Investment/kW	\$0.23

- The methodology for deriving the demand and energy charges for High Demand rates is identical to that for Large General Service.

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# LARGE AND HIGH-DEMAND GENERAL SERVICE RATES: Continued

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- Demand and energy charges for peak (6 am to 10 pm Monday-Saturday) and off-peak (10 pm to 6 am Monday-Saturday, all day Sunday and holidays) time periods are designed to encourage consumption in less expensive off-peak period.
- Peak demand charge is set to collect a targeted amount of the distribution costs.
- Off-peak demand charge is set equal to the transformer investment discount.
- Energy charges are set to collect the energy costs and the remainder of the distribution costs not collected by the demand charges. The differential ratio between peak and off-peak energy rates is based on historical electricity prices and is set at 1.5:1. The target differential between peak and off-peak energy rates is the differential between peak and off-peak marginal energy costs.
- Minimum charge equals 100% of the marginal customer service cost per meter per day.
- Meets policy objectives [B](#), [D](#) and [E](#).